ABSTRACT OF THE DISCLOSURE

A transmitter assembly includes a sandwich made up of a three axis transmitter, driven by a transmitter driver, mounted on a permeable attenuator with a spacer interposed between the transmitter and the attenuator. The attenuator is mounted on top of a conductive plate. About the periphery of the conductive plate or the permeable attenuator, a compensation coil is provided that is driven by a compensation coil driver. The compensation driver energizes the compensation coil in a way to optimize compensation for magnetic field edge effects. In a modification, a number of individual compensation coils may be arranged about the periphery of the conductive plate or permeable attenuator, with the configuration of the compensation coils being designed based upon the factors set forth above, namely, the number and configuration of the transmitter coils, the shape of the permeable attenuator, and the configuration of the conductive plate. The individual compensation coils in the modification may be activated in tandem or individually to compensate for non-uniform magnetic edge fields caused by the non-symmetrical configuration of, for example, three transmitter coils or, for example, a square permeable attenuator rather than a circular permeable attenuator.

Sub A1